

ICC Investigation of ComEd Distribution and Transmission System Reliability

This proposal outlines the scope and objectives for a comprehensive review of ComEd's transmission and distribution system design and reliability and an investigation of selected outages which occurred in ComEd's service territory beginning July 30, 1999.

Proposed Scope of Investigation and Review

Stage I. Service interruptions beginning July 30, 1999, through August 13, 1999, including the Northwest substation outages, the Cortland cable failure outages, and the Jefferson substation outages and other significant outages based on similar occurrences

A. Events, procedures, practices, documentation and information specific to the identified outages regarding condition of equipment involved (including any testing required to determine the cause or causes of equipment failures), system design and planning considerations, and maintenance and operation history, including inspection, service, repair, replacement and upgrading.

B. Procedures, practices, documentation and information regarding event-specific planning for, and execution of, internal emergency response and system restoration efforts, including, at a minimum, pre-outage planning, communications planning and execution, resource dispatch, and load switching.

C. Procedures, practices, documentation and information regarding event-specific external communications and response planning, and plan execution, for public notification, and coordination/cooperation with appropriate public safety officials and entities.

Stage II. Comprehensive investigation of ComEd's entire distribution system design and reliability, including public safety issues, and a comparison of the identified outages with similar events in other major metropolitan distribution systems to determine whether the distribution system processes and practices utilized in other major metropolitan areas are appropriate for implementation by ComEd.

A. Distribution System Reliability

1. Investigation and evaluation of ComEd's entire distribution system, including adequacy of its system planning and design processes, and the adequacy of the existing distribution system to meet current and projected future demands, including

a review of ComEd's planning, procedures and practices to monitor and respond to changing demand on its distribution system components.

2. Investigation and evaluation of ComEd's planning, procedures, practices, documentation and information for inspecting, identifying equipment problems, and maintaining, upgrading, repairing, and replacing aging equipment.

3. Investigation and evaluation of ComEd's planning, procedures and practices employed to identify and mitigate inadequate system performance, and emergency response and system service restoration practices, including ComEd's system-wide procedures, practices and documentation of communications with public safety officials.

4. Investigation of the organizational and management structure of ComEd and the adequacy of ComEd's performance measures to evaluate personnel and system reliability.

B. Comparative System Reliability Study

Review of major outages in major metropolitan areas outside northeastern Illinois, during the past three years, to determine whether the processes involved in system planning, design, performance, restoration and external communications in those outages are applicable to ComEd, and whether the adoption of any of these processes would improve the performance and reliability of ComEd's distribution system.

Stage III. Comprehensive investigation of ComEd's entire transmission system design and reliability, including public safety issues.

1. Investigation and evaluation of ComEd's transmission system, including adequacy of its system planning and design processes, and the adequacy of the existing transmission system to meet current and projected future demands, including a review of ComEd's planning, procedures and practices to monitor and respond to changing demand on its transmission system components.

2. Investigation and evaluation of ComEd's planning, procedures, practices, documentation and information for inspecting, identifying equipment problems, and maintaining, upgrading, repairing, and replacing aging equipment.

3. Investigation and evaluation of ComEd's planning, procedures and practices employed to identify and mitigate inadequate system performance, and emergency response and system service restoration practices, including ComEd's system-wide procedures, practices and documentation of communications with public safety officials.

4. Investigation of the organizational and management structure of ComEd and the adequacy of ComEd's performance measures to evaluate personnel and system reliability.

An outside consultant would be employed to perform the investigation and review. Staff would routinely communicate with and monitor the consultant's activities to help ensure timeliness, quality and comprehensiveness of work products and coordination with concurrent investigation efforts.

Proposed Objectives of Investigation

The investigation will result in a final written report, consisting of a series of intermediate reports on collections of related reliability issues as those portions of the investigation are concluded, that provides a determination of:

1. Root causes of the specific outages in question.
2. Adequacy of ComEd's planning, procedures and practices to mitigate inadequate system performance during and following periods of peak demand and outage contingencies.
3. Adequacy of ComEd's planning for and execution of emergency response and system restoration efforts, including effect on public health and safety.
4. An evaluation of ComEd's internal and external communications efforts regarding outage and service restoration information, including effects on public health and safety.
5. Adequacy of ComEd's routine and programmatic inspection, maintenance, repair, replacement, and upgrade of equipment and on a system-wide basis.
6. A comparison of ComEd's distribution system performance to other major metropolitan service territories over the past year throughout the nation, detailing significant differences and similarities in system operating conditions, planning, design, and operation.
7. An assessment of the organizational and management structure of ComEd and the adequacy of ComEd's performance measures to evaluate personnel and system reliability.

Findings derived from the final investigative report should provide specific and detailed recommendations upon which ComEd and the Commission may take action to reduce the future likelihood of outages and/or reduce the impact of such outages on

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affected customers, and a recommended schedule for accomplishing the recommendations.